

V.3.3-STAGEREV STAGE REVIEW OPERATION

Identifier: STAGEREV

Application: All programs

Description: This Operation compares an observed and forecast stage time series and creates adjustments that are used by Operation ADJUST-H.

Operation STAGEREV divides the forecast hydrograph equally into four slices and creates a table of daily average computed differences between an observed and computed stage time series per stage slice for the entire run time. The number of values used in determining the daily average balances per stage slice from start time to present are also displayed. Time series of the stage slice delineation and the average daily balance per slice are created.

The maximum run length is 30 days.

Developed by: Northwest River Forecast Center

Allowable Data Time Intervals: 1 hour

Time Series Used: Time series used in this Operation are as follows:

<u>General Type</u>	<u>Dimn</u>	<u>Units</u>	<u>Use</u>	<u>Required</u>	<u>Data Time Interval</u>	<u>Missing Values Allowed</u>
Observed stage	L	FT	I	yes	1	no
Forecast stage	L	FT	I	yes	1	no
Range1LowLimit	L	FT	I	yes	24	no
Range2LowLimit	L	FT	I	yes	24	no
Range3LowLimit	L	FT	I	yes	24	no
Range4LowLimit	L	FT	I	yes	24	no

Input Summary: The card input for this Operation is in free-format and is as follows:

<u>Card</u>	<u>Field</u>	<u>Format</u>	<u>Contents</u>
1	1	A72	User supplied information

```

2                                     Input time series definition:
      1      I      Input time series data time interval
      2      A8     Observed stage time series identifier
      3      A4     Observed stage time series data type
                    code
      4      A8     Forecast stage time series identifier
      5      A4     Forecast stage time series data type
                    code
      6      I      Output time series data time interval
      7      A8     Range time series identifier
      8      A4     Output time series data type code

3                                     Output time series definition:
      1      A8     Range1 lower limit time series
                    identifier
      2      A8     Range2 lower limit time series
                    identifier
      3      A8     Range3 lower limit time series
                    identifier
      4      A8     Range4 lower limit time series
                    identifier

```

Sample Input and Output: Sample input for this Operation is shown in Figure 1. Sample output from the parameter print routine is shown in Figure 2. Sample output from the execution routine is shown in Figure 3.

Figure 1. Sample card input for Operation STAGEREV

```
STAGEREV   PRTO3
STAGE REVIEW
  1 PRTO3   STG   PRTO3ADJ SSTG   24 RANGE   SSTG
SBALR1    SBALR2   SBALR3   SBALR4
```

Figure 2. Sample output from Operation STAGEREV print parameter routine

```
*****
STAGEREV OPERATION      NAME=PRTO3      PREVIOUS NAME=
*****

STAGE REVIEW- VERSION   1
STAGE REVIEW

INPUT TIME SERIES              ID      CODE
OBS/FCST TIME INTERVAL       1
OBSERVED          STAGE      PRTO3   STG
DW OBS/FCST       STAGE      PRTO3ADJ SSTG

PRIMARY OUTPUT TIME SERIES
OUTPUT TIME INTERVAL         24
RANGE LIMIT                 RANGE   SSTG
AVE BALANCE RANGE1          SBALR1
AVE BALANCE RANGE2          SBALR2
AVE BALANCE RANGE3          SBALR3
AVE BALANCE RANGE4          SBALR4
```

Figure 3. Sample output from Operation STAGEREV execution routine

NO. OF VALUES PER AVERAGE DAILY BALANCE							
STAGE RANGE	5/27	5/28	5/29	5/30	5/31	6/1	6/2
11.5->12.7:	20	24	4	0	0	0	0
12.7->13.9:	0	0	9	0	0	0	0
13.9->15.2:	0	0	10	24	24	24	4
15.2->16.4:	0	0	0	0	0	0	0

AVERAGE DAILY BALANCES										
STAGE RANGE	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5
11.5->12.7:	.4	.3	.3	.3E	.3E	.3E	.3E	.3E	.3E	.34
12.7->13.9:	.2E	.2E	.2	.2E	.2E	.2E	.2E	.2E	.2E	.2E
13.9->15.2:	.1E	.1E	.1	.2	.2	.3	.2	.2E	.2E	.2E
15.2->16.4:	.1E	.1E	.1E	.2E	.2E	.3E	.2E	.2E	.2E	.2E

Notes:

Data are in English units.

An 'E' following a data value indicates it is estimated.